THE VETERINARY RECORD

FOUNDED BY WILLIAM HUNTING, F.R.C.V.S., 1888.

No. 14 APRIL 3, 1943 VOL. 55.

Cattle Breeding in Nyasaland

With Particular Reference to the Friesland-Hissar Cross-bred

By

S. G. WILSON

PROVINCIAL VETERINARY OFFICER, NYASALAND

INTRODUCTION

Although the problem of improving cattle in the Tropics has engaged the attention of European settlers and Government Officers over a period of many years, it is doubtful even yet if the difficulties involved are fully realised. The result has been a confusion of thought and effort and in many cases financial losses have led to discouragement and set-backs. The history of cattle breeding in Nyasaland provides no exception to this generalisation.

BREEDING POLICIES

Surveying the history of tropical cattle breeding as a whole, one can recognise several phases. Early Colonial settlers, recognising the productive limitations of indigenous native cattle, sought a natural remedy by importing the highly specialised milk and beef breeds of Europe. Their disregard for environmental factors such as disease, high temperature and low standard of nutrition, resulted in heavy mortality and in more or less rapid degeneration of type amongst survivors. The factors governing this degeneration have been the subject of much recent investigation, *e.g.*, Hammond (1932), Bisschop (1938), Bonsma (1940), and Daubney (1942). The underlying causes are now more clearly understood.

As a result of disappointments with European breeds, and following the work of Indian workers on the Sahiwal cattle, more attention was paid to the improvement of indigenous breeds, *e.g.*, Anderson (1935) and Guy (1937) in Kenya, Stewart in the Gold Coast (1935-36 *et seq.*), while in South Africa much attention has been focused on the various native breeds by the writings of Quinlan, Bisschop and Curson (1932), Curson *et al.* (1931, 1933, 1935) and by Nobbs (1927) in Southern Rhodesia. Much work still remains to be done in this field.

Interesting as this work is, however, profitable European farming may depend more on the evolution of a tropical type of animal which, while possessing some of the productiveness of the European breed, will retain the hardy constitution of native cattle. Success when achieved along these lines is spectacular, the most noted examples being the Santa Gertrudis beef breed in Texas, Kelley (1932), Schutte (1935), and the Sahiwal-European dairy crosses in Jamaica described by Cousins (1931).

In the present article a preliminary report is given of an attempt on the estate of Mrs. Duncan, Rathdrum Farm, Zomba, to breed such a tropical breed to suit Nyasaland conditions.

NYASALAND CONDITIONS

As a cattle rearing country, the Nyasaland Protectorate may be divided into two distinct areas, each with its own set of problems. In the Northern Province with a predominate native population and with tick-borne diseases, especially East Coast fever, prevailing, the present problems are those of disease control, encouraging native animal industries and demonstration of simple measures of improved animal management (Wilson, 1941). For many years to come, native indigenous cattle will form the medium with which we must work.

In Southern Province, where the European population is chiefly concentrated and where for some reason not yet understood East Coast fever is absent, the tendency has been to use European breeds to build up grade herds. There is no doubt whatever that the system has resulted in considerable improvement in the scrub animal, especially where breeding has been combined with better feeding and management. A grade bull is certainly better than one of non-descript breeding and on the first cross the breeder has the benefit of "hybrid" or "cross-breed" vigour.

Many breeds have been imported, including Friesland, Sussex, Aberdeen-Angus, Shorthorn, Afrikander, Jersey, Hereford and Ayrshire. In fact, the introduction of many different breeds was a primary necessity in order to determine which breed or breeds may be the most suitable under local conditions. But all this effort will have been in vain unless exact breeding records and performance of the various breeds are accurately and systematically tabulated. Otherwise, the time when the present heterogeneous collection of cattle can be replaced by more homogeneous herds bred from one or two European breeds will be indefinitely postponed. At present a wealth of data on the performance of the pure-bred herds, grade herds, and of triple crosses, await a recorder.

Friesland Cattle in Nyasaland

Some breeders have, however, bred with persistency and method towards a definite objective and the work of Mrs. Duncan, Rathdrum Farm, Zomba, may be cited as a striking example. Mrs. Duncan has been the foremost Friesland breeder in the country. Her original Farm was at Limbe where conditions are less tropical than in most other localities of Nyasaland, the altitude being 3,800 M.S.L. and mean annual rainfall 50 to 60 inches, while mists are prevalent during the cold dry months. Under these climatic conditions, and under careful intensive methods of management, the cows of her Friesland herd realised their full inherited capacity for high milk yields, and no degenerative changes were noted. For instance "Colonies Plaats Bleske," Mrs. Duncan's best pedigree Friesland cow, yielded 78 lb. of milk in a single day, and 24,000 lb. approximately in a single lactation. Her Friesland heifer herd calving down at two to two and a half years old invariably yielded 8,000 lb. in their first lactation. Full records of all animals in her herd are available.

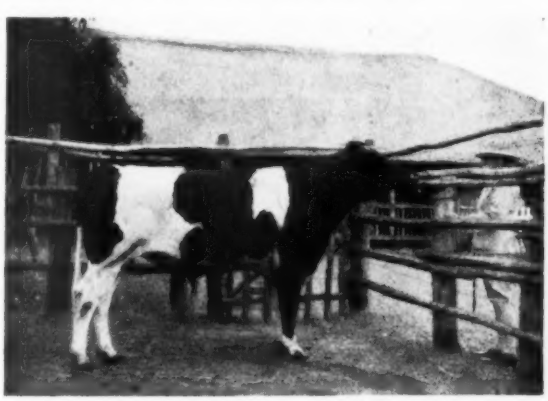


FIG. 1.—Pure-bred Friesland bull "PRINCE WILLIAM OF RATHDRUM," aged 3 years 1 month 16 days. Sire: "PRINSLOO WILLEM." Dam: "DE GRENDAL HAASIE."

As recent sires she has been using bulls from two strains. "De Grendel Renske," imported by Mrs. Duncan from Cape Province as an eight-months-old calf, is from the "Botermyn" family, while her more recent bull "Prince William of Rathdrum," Fig. 1, is a son of "Prinsloo Willem" who, in turn, was son of the famous "Willem." The introduction of these two strains related to such famous preferent bulls is, of course, a distinct acquisition to the country.

From experience gained in the past 13 years of breeding and maintaining a herd of pedigree "Friesland" cattle in Nyasaland, Mrs. Duncan is of opinion that, given conditions of shade in the hot season, and adequate water supply and shed shelter to resort to on rainy and cold nights, the "Friesland" is the best breed for dairying on a large and profitable scale in Nyasaland. She also suggests that the breed acquires tolerance to redwater and gallsickness as readily as the half-bred or local cattle.

FRIESLAND-HISSAR CROSS-BREDS

While still at Limbe, in 1937, Mrs. Duncan started her experiments towards producing a more resistant tropical animal by using pedigree Friesland bulls on a herd of cows of mixed origin, some being selected females of the local Shorthorn-Zebu breeds while others showed in conformation and colouring obvious traces of a mixture of "Hissar" and "Sahiwal" breeds. Using the Friesland bull "Badshah of Rathdrum" results were very encouraging, her heifer calves maturing

early and calving down between the ages of one year and ten months and two years and three months. All these heifers yielded from one and a half to two and a half gallons of milk, whereas their dams only yielded from four to seven pints a day. "Wazir," Fig. 2, is from such a cross, her dam being of mixed Hissar-Sahiwal origin while her sire was the pure-bred Friesland "Badshah" of Rathdrum.

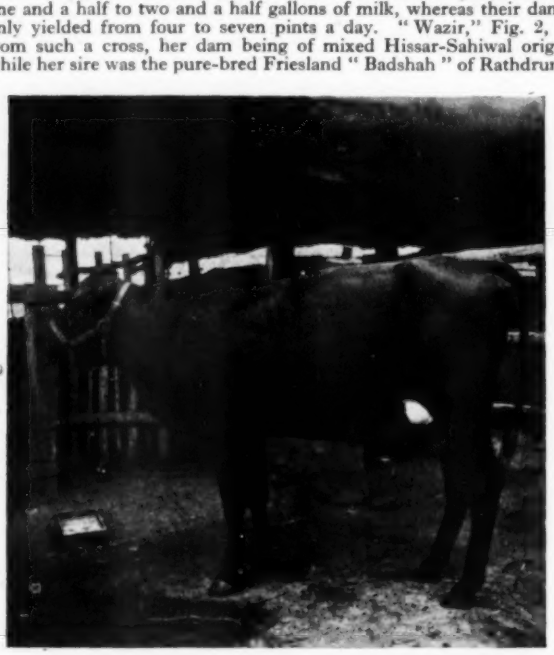


Fig. 2.—"Wazir," a Friesland-Hissar cross-bred cow, the sire being the pure-bred Friesland bull "Badshah of Rathdrum."

On moving from Limbe to her present residence at Rathdrum Farm, Zomba, Mrs. Duncan decided to give up dairying on a large scale, and sold nearly all her pedigree Friesland stock, but retained her old cow "Colonies Plaats Bleske," a daughter "Buttercup," a granddaughter "Noreen," and two young bulls "Prince William of Rathdrum" and "Sultan of Rathdrum." She also sold the majority of her half- and three-quarter-bred stock.

Rathdrum Farm is situated on the Lake Shirwa plain 2,600 M.S.L. on a light sandy soil zone. No exact meteorological data are available for Rathdrum Farm itself, but data from Zomba Station, six miles away and 3,020 M.S.L., are given in Table I.

Table I

Months	*Station—Zomba* Mean Air Temperature Dry Bulb		*Altitude* 3020 *M.S.L.* Humidity per cent.		*Year* 1941 Rainfall
	9 Hrs.	15 Hrs.	9 Hrs.	15 Hrs.	Inches
January ..	74·2	77·2	75·7	70·4	7·65
February ..	74·5	78·5	82·3	70·6	12·72
March ..	73·1	75·9	76·2	71·6	2·71
April	73·5	80·4	74·4	51·9	0·35
May	70·6	77·6	69·3	52·4	—
June	67·3	74·3	64·0	48·9	—
July	64·2	71·3	65·7	49·5	0·07
August ..	66·4	73·9	65·1	44·7	0·46
September ..	72·3	79·8	57·5	42·4	0·01
October ..	78·2	84·4	57·8	41·0	1·03
November ..	76·4	79·9	69·4	64·1	9·94
December ..	74·8	75·7	76·4	75·4	6·76
					41·70

Owing to the open nature of the country, and a good tree cover, and possibly also to the proximity of Lake Shirwa, the actual Rathdrum temperatures are said to be slightly lower than Zomba recordings, while rainfall variations on an adjoining estate are between 25 and 50 inches per annum.

Incidentally, the transfer of her remaining Friesland stock from Limbe to Rathdrum has caused no deterioration to her stock. This is probably due to the fact that the lack of green feeding enjoyed by her cattle in Limbe has been made up by suitable feeding of soya bean hay, sweet potato tops and roots with veld hay and rice straw as roughage.

Continuing her Limbe experiments at cross breeding, Mrs. Duncan purchased a group of Hissar cows from the late Mr. Chapman, Station Superintendent North-Western Railways, Delhi. Until August, 1939, these cattle were kept on Mr. Chapman's Orpington Estate, Dedza.

Amongst the cattle purchased from Orpington Estate were "Rani," Fig. 3, and her calf "Maria." "Rani" was imported to Nyasaland as a heifer in 1932 and her early breeding record is unknown. After her purchase by Mrs. Duncan she produced a pure-bred Hissar female calf, "Sita," in October, 1939, and was then bred to the pedigree Friesland bull "De Grendel Renske." As a result, the Friesland-Zebu cross-bred calf "Nandkuar" was born in November, 1940 (Fig. 5).

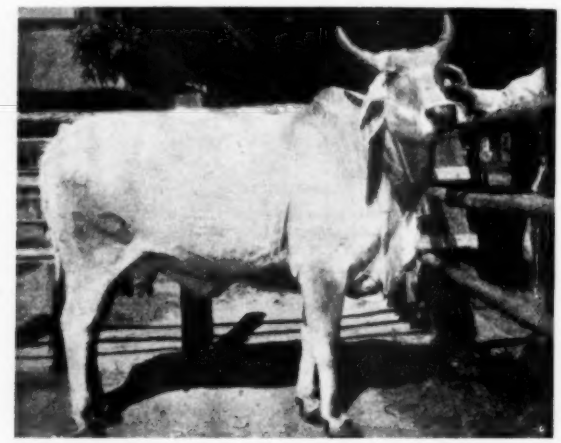


Fig. 3.—"Rani," a grey pure-bred Hissar cow No. H/280, imported from India to Nyasaland as a heifer in 1932.

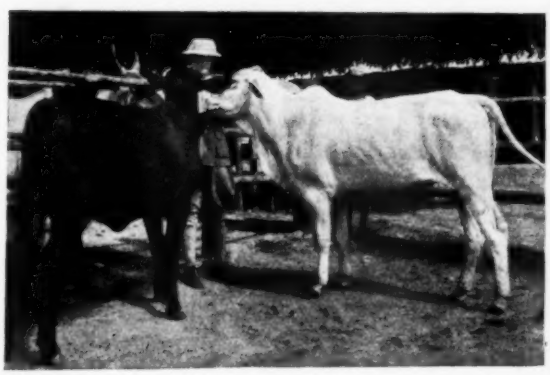


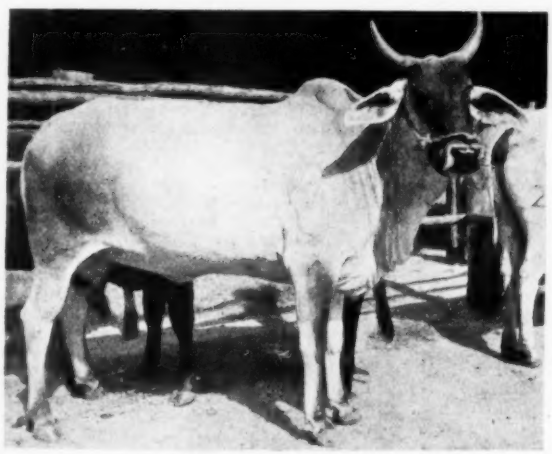
Fig. 4.—"Sita," pure-bred Hissar heifer together with her 13 months younger half-bred half sister "Nandkuar." Both are calves of "Rani," Fig. 3.

Fig. 5.—"Nandkuar," Friesland-Hissar half-bred aged 19 months. Sire: "De Grendel Renske"—pure-bred Friesland. Dam: "Rani"—pure-bred Hissar.

Both these calves of " Rani " are shown together in Fig. 4, and the early maturing qualities of the Friesland-Hissar cross are at once noticeable. When the photograph was taken (March, 1942) " Sita " had not been served, while her half sister " Nandkuar," although 13 months younger, was four months in calf, having been served accidentally on December 2nd, 1941, when only 13 months old, by the Friesland bull " Prince William of Rathdrum."

" Rani " has produced another half-bred calf, " Hansi " (Fig. 6), to the same Friesland sire on January, 1942. As with most Hissars, " Rani " is a poor milker but is able to rear her calves without difficulty and breeds regularly.

Fig. 6.—" Hansi "—Friesland-Hissar half-bred, aged 8½ months. Sire: " De Grendel Renske." Dam: " Rani."



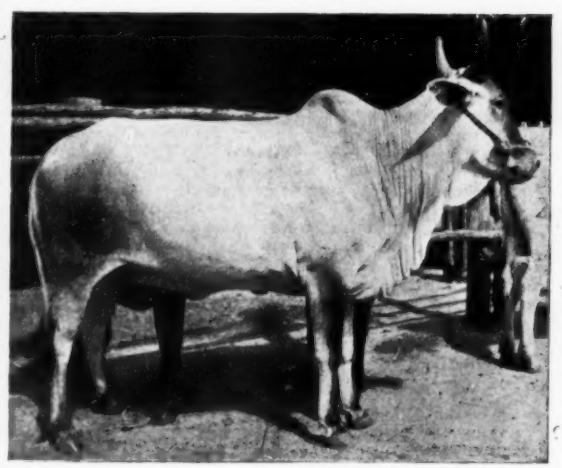


Fig. 7.—" Maria," dark grey pure-bred Hissar cow. Dam: " Rani."

" Maria," Fig. 7, the pure-bred dark grey Hissar calf of " Rani," was served by the Friesland bull " Renske " and calved in August, 1941, producing the female half-bred " Lorna," Fig. 8. She was again bred to the Friesland bull " Prince William of Rathdrum," and a male calf, " Delhi," Fig. 9, was born in June, 1942. " Maria " has been allowed to suckle this last bull calf and in addition yields an average of 7½ pints a day.

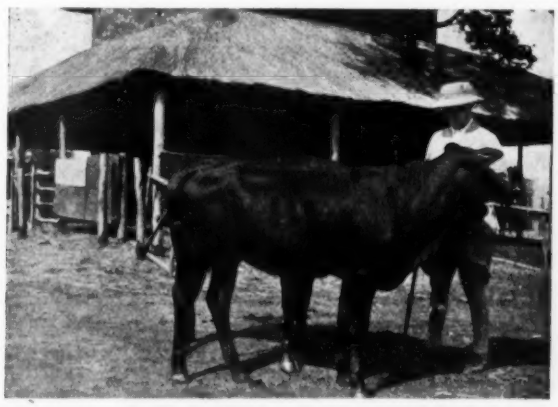


Fig. 8.—" Lorna "—half-bred calf 14 months old. Sire: " Renske "—pure-bred Friesland. Dam: " Maria "—pure-bred Hissar.

Fig. 9.—" Delhi "—half-bred calf 4 months old. Sire: " Prince William "—pure-bred Friesland. Dam: " Maria "—pure-bred Hissar.

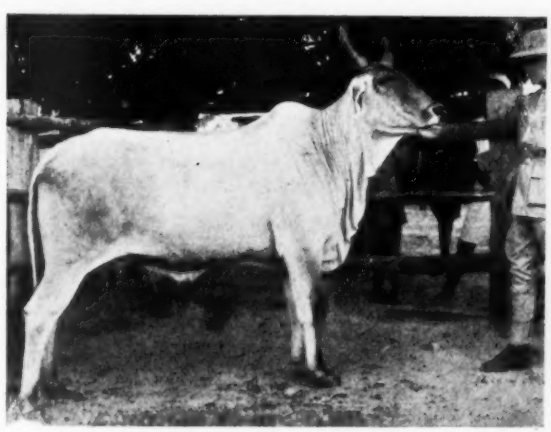


Fig. 10.—" Nandkuana "—a grey pure-bred Hissar cow aged 6 years approx.

"Nandkuana," Fig. 10, a grey pure-bred Hissar cow, was born in Nyasaland at Orpington Estate from imported Hissar sire and dam, and was bought as a three-year-old by Mrs. Duncan in August, 1939. She gave birth to the pure-bred Hissar calf "Hamida," Fig. 11, in October, 1939. Since then she has been bred to the pedigree Friesland bull "Renske," producing a half-bred heifer calf "Wiro," Fig. 12, in December, 1940, and "Guru," a half-bred bull calf in March, 1942. "Nandkuana" has yielded up to 16 pints of milk a day.

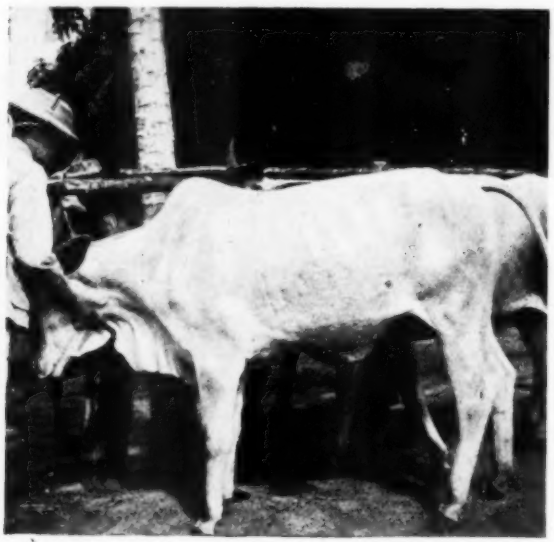


Fig. 11.—"Hamida"—pure-bred Hissar calf of "Nandkuana," aged 2 years 5 months when photographed.

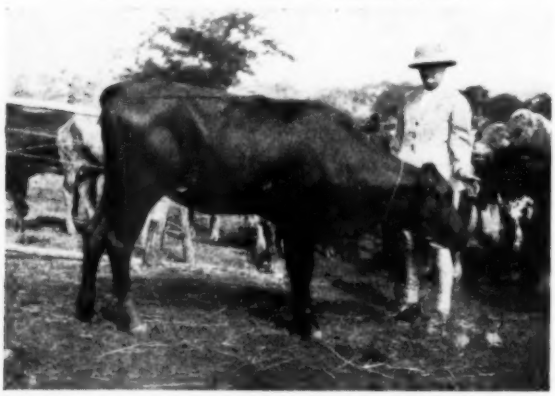


Fig. 12.—"Wiro"—half-bred Friesland-Hissar calf aged 1 year 10 months. Sire: "De Grendel Renske"—pure-bred Friesland. Dam: "Nandkuana."

The colouring and conformation of the Friesland-Hissar cross, as shown especially by "Nandkuar," Fig. 5, "Hansi," Fig. 6, and "Lorna," Fig. 8, are worth noting; all these animals have been black or dark brown in colour and the Friesland colouring of the sire has been entirely lost. The skin is pigmented and the coat is the fine "Zebu" type. On the other hand, the hump of the Zebu Hissar dam is lost and the back is straighter, the hindquarters less sloping with tail set higher. The pendulous "Zebu" navel and loose folding dewlap of the dam may persist and become more noticeable as the beast gets older. Important both from a meat and milk point of view, however, are the quick-maturing characters of the cross-bred animal combined with docility.

Comparison between the Friesland-Hissar cross-bred animal and the Friesland-local Shorthorn Zebu cross is difficult as with the latter cattle we are not dealing with a "breed" in the accepted sense of the term. Results therefore vary but it is an accepted fact that in most cases the hump is lost but the Friesland markings persist.

Discussion

On the climate shown by Bonsma (1940), Nyasaland falls within the isotherms where degeneration of European breeds may be expected. Nyasaland temperatures, as shown on Table I, are, however, far from extreme, and the cold night temperatures of the cool season must have a refreshing effect on exogenous breeds. During the hot months of 1941, the temperature rose above 90° F. on only three occasions. Regan, quoted by Daubney (1942), suggests that the upper temperature limit of capacity of European cows to maintain efficient heat regulation lies between 80° and 85° F., depending on breed.

In fact, in experiments dealing with the effect of tropical climatic factors, emphasis is always laid on the variable resistance shown by the various British breeds. Thus under Rathdrum conditions pure-bred Sussex cattle are much more susceptible to high temperatures than the Friesland, and there is little doubt whatever of the superiority of the Zebu and Zebu crosses in this respect. At Rathdrum, while the Friesland-Hissar cross and even indigenous Shorthorn Zebu will seek shade during the heat of day, the pure-bred Hissar will be content to remain in sun. And, as already stated, shade must always be provided for British breeds. On European farms in the Southern Province shade and water supply are invariably present and adequate. The same cannot always be said of food supply. There is little doubt that, could the protein and energy value of the ration be fully maintained throughout the year, degeneration of stock, if seen at all, would be less marked. At present, on range conditions, both native as well as half-bred cattle lose condition during the dry season in the absence of supplementary feeding. Pure-bred Hissars also lose weight but together with the Friesland-Hissar cross they tend to regain condition very quickly on a maize bran, salt and bone meal ration.

The fact therefore remains that for profitable farming with European breeds much attention must be paid to environment. Should Mrs. Duncan, by a system of hybridisation and interbreeding of the Friesland-Hissar cross-bred animals, evolve a hardy type that is quick maturing and breeds regularly, the low maintenance costs would more than compensate for any decrease in milk yield compared with pure-bred Friesland stock. For its proper prosecution and extension, work like this would require Government assistance both technical and financial.

The Texas and North Australian experiments are less interesting in this respect than the work on Hope Farm, as work in the former areas has been confined to the production of a ranch beef breed, the Shorthorn or other British beef breeds being used as the foundation stock. In Hope Farm, Jamaica, however (Cousins, 1931) work has been directed towards the production of a tropical dairy cow and as a solution it is suggested that the Indian-Montgomery breed blended with European dairy breeds produce the productive dairy cows suitable to Jamaica conditions. Preference is shown for the Brown-Swiss-Montgomery amalgamation as well as the Red Poll cross. With regard to Friesland it was found that the constitution was strengthened by mixture of Zebu blood, the most successful sire bred being "Norman." "Norman" was the result of crossing "Norbrook 2nd," a half-bred Friesland cow, to "Pusa," a Sahiwal bull, a reverse cross to that used by Mrs. Duncan. He was a black bull with few white markings but retained the Friesland head and shoulders.

In Jamaica, Sahiwal-Montgomery breeds are to be preferred to Hissar breeds for cross breeding owing to their higher milk yields. It is suggested, however, that in Nyasaland the Hissars may be more suitable and note must be taken of the successful breeding experiments carried out at the Government Farm, Hissar, India, to improve Hissar milk production.

With regard to future breeding policy, there is little reason to doubt the advisability of single purpose breeding. This is the considered Indian policy (Olver, 1933), as breeding for dual purposes was considered too complicated to suggest any immediate success. Nyasaland requirements for both her European and native population lie chiefly in dairy breeds, both to meet the human needs for increased milk consumption, and to supply the raw product for the dairy industries of butter and ghee.

Acknowledgments.—My thanks are due to Mrs. H. G. Duncan for permission to inspect and photograph her herd and for supplying me with notes, records, and additional photographs of her animals. But for her unfailing assistance and advice, the preparation of this article would have been impossible.

Mrs. Duncan's success as a cattle breeder and her expert knowledge of local cattle conditions are of course recognised by every one concerned with animal development in Nyasaland.

My thanks are also due to the Chief Veterinary Officer for permission to publish.

References

Anderson, J. (1935.) *E. Afr. Agric. J.*, **1**, 251-258.
Bisschop, J. H. R. (1938.) *Report of the 13th International Veterinary Conference*, **2**, 935-968.

CLINICAL COMMUNICATIONS

Two Interesting Case Histories in Cows

J. P. PICKERING, M.R.C.V.S.
HEXHAM

I have pleasure in sending you two case histories which may be of interest to your readers, (*a*) an account of recent difference of opinion as to occurrence of fremitus in the uterine artery in pyometra; (*b*) to show how easily Trichomoniasis may be spread.

Subjects—Two very good pure-bred Friesian cows, "Melporus" and "Everus."

History and Examination.—These cows were sent to Cheshire to be served by a certain bull. For a time after return both cows were presumed to be in calf owing to absence of oestrus. On 30.11.42 the owner sought my assistance as he had received a letter from the owner of the bull to the effect that Trichomoniasis had been diagnosed in his herd and his veterinary surgeon had traced its appearance to a cow previously sent by this owner. In view of the fact that I have had an intimate knowledge of this herd for years and there has never been any breeding trouble in it, this was to me a most astonishing revelation.

30.11.42.—"Melporus" served early September; found not pregnant but suffering from endometritis of the first degree. Treated by irrigation of the uterus with 1:1,000 iodine solution.

"Everus" stated to have been served in August, but recently I ascertained that the actual date was May 18th, 1942. The byreman reported the appearance of pus from the vagina every three weeks. Examination showed flakes of white discharge in vagina, cervix patent, right horn of uterus of a size comparable with a three months' pregnancy but wall thickened and unyielding. There was distinct fremitus in the uterine artery lying on right of anterior part of pelvic cavity. The artery was slightly thicker than a lead pencil.

Diagnosis.—Guarded: pyometra following infection with *Trichomonas or* pregnancy in right horn associated with endometritis in left horn.

7.12.42.—"Melporus"—Reported in oestrus previous day. Endometritis clearing. Irrigated with iodine solution. "Everus" not examined.

28.12.42.—"Melporus"—improved. "Everus"—reported cessation of usual discharge. Not examined.

16.1.43 (Mr. R. A. Paterson).—"Melporus"—improved; uterus irrigated. "Evirus"—examined: no discharge in vagina: right horn flaccid: left horn normal. Uterine artery palpated, no fremitus. Body of uterus irrigated.

21.1.43 (J. P. P.).—"Everus" examined. Uterus same as on 30.11.42. Uterine artery palpated—somewhat thicker than a match-stick; pulsation felt but no fremitus.

Diagnosis.—Pyometra. For the purpose of irrigating the uterus a two-way catheter was passed through the cervix, but to secure passage into right horn a membrane was quite palpably ruptured. At this a quantity of milky fluid flowed out of the catheter.

Stilboestrol (2·5 c.c.) was now injected intramuscularly. A copious flow of similar fluid 24 hours later was reported. Subsequently repeated irrigations were carried out to clear up the endometritis. From time to time efforts were made to demonstrate the organism but without success. In view of the history, however, I am satisfied that the condition was Trichomoniasis.

BISSCHOP, J. H. R., and CURSON, H. H. (1933.) *Onderstepoort J. vet. Sci.*, **1**, 621-627.
BONSMA, J. C. (1940.) Farming in South Africa, **15**, 373-385.
COUSINS, H. H. (1931.) The History of the Hope Farm; Govt. Printer, Jamaica.
CURSON, H. H., and BISSCHOP, J. H. R. (1935.) *Onderstepoort J. vet. Sci.*, **5**, 621-644.
CURSON, H. H., THOMAS, A. D., and NEITZ, W. O. (1931.) *J. S. Afr. vet. med. Ass.*, **2**, 138-140.
DAUBNEY, R. (1942.) *E. Afr. agric. J.*, **7**, 127-141.
GROENEWALD, J. W., and CURSON, H. H. (1933.) *Onderstepoort J. vet. Sci.*, **1**, 601-620.
GUY, H. C. W. (1937.) *E. Afr. agric. J.*, **2**, 319-326.
HAMMOND, J. (1932.) *Report on Cattle Breeding in Jamaica and Trinidad*, E.M.B. 58; H.M. Stationery Office, London.
KELLEY, R. B. (1932.) Pamphlet No. 27, Council for Scientific and Industrial Research, Australia.
NOBBS, E. A. (1927.) *S. Afr. J. Sci.*, **24**, 328-342.
OLVER, A. (1933.) Agric. and Livestock, India, **3**, 205-210.
QUINLAN, J., BISSCHOP, J. H. R., and CURSON, H. H. (1932.) *J. S. Afr. vet. med. Ass.*, **3**, 22-24.
SCHUTTE, D. J. (1935.) *Bulletin No.* 136 *Department of Agriculture and Forestry, Union of S. Africa.*
STEWART, J. L. (1935-36 *et seq.*). *Report on the Department of Animal Health, Gold Coast Colony.* Gov. Printer, Accra, Gold Coast.
WILSON, S. G. (1941.) *Vet. Rec.*, **53**, 607-610.

Severe Dyspnoea and its Etiology

HAMILTON KIRK, M.R.C.V.S.
LONDON

Cases of severe dyspnoea from lung disease may occasionally be met with which do not present the classical features to be expected of them, and a true diagnosis in life may be very difficult. This was recently exemplified in the following case:—

A Corgi, 18 months old, was seen seven weeks previously by a veterinary surgeon, who at first diagnosed bronchitis and, later, congestion of the lungs. It became gradually worse and a second opinion was obtained.

Very severe dyspnoea was then evident, and the consultant diagnosed emphysema, but as the dog had been run over six months earlier he advised radiography and brought it to me.

I took two radiographs, both of which showed that the thoracic cavity was almost filled with dense tissue, only the apices of the lungs being in use. That seemed to rule out emphysema, and yet such a diagnosis had undoubtedly been supported by the crackling noises auscultated over the chest and the extra *expiratory* effort noted. Strangely, too, there was a general resonance on percussion of the chest walls. There was, however, an absence of the barrel-shape so frequently assumed by the chest in emphysema.

The history could not be ignored and in view of the intrathoracic opacity being as dense as that of the liver, the opinion grew that an original small rupture of the diaphragm had now become a rent through which the liver had gained access to the thorax. An opaque meal was given, but none showed anterior to the diaphragm because, presumably, the liver occluded the hole. To lift the dog on to its hind legs gave obvious respiratory relief as would be expected in diaphragmatic hernia.

Whichever diagnosis was correct there seemed no hope of a cure and it was decided to induce euthanasia, in the early stages of which an exploratory laparotomy would be made.

The *post-mortem* examination revealed neither emphysema nor rupture, but a dense greyish hepatisation of the posterior four-fifths of both lungs, the pericardium being adherent to the left costal pleura and the bronchi full of pus.

The dog had suffered from lobular pneumonia—a diagnosis which had seemed negatived by auscultation and percussion. It is interesting to note, too, that the dog had never puffed out its cheeks (a feature so diagnostic of pneumonia) and had exhibited no cough except after exertion or feeding.

. . . . . .

Another case, that of an Alsatian, which had shown mixed and rather puzzling symptoms of lung disease, was finally brought to me by the practitioner for a second opinion. A radiograph revealed an open safety pin lodged in the oesophagus just above and behind the heart, but fortunately the point was directed backwards and upwards, thus to a large extent facilitating removal.

AGRICULTURAL SCHOLARSHIPS

The Ministry of Agriculture and Fisheries invites applications for the undermentioned scholarships:—

Ten Senior Scholarships, tenable at Agricultural Colleges or University Departments of Agriculture, for diploma or degree courses in an agricultural subject or at veterinary colleges for courses in veterinary science;

Six Extended Junior Scholarships (for those who have already held Junior awards), and 30 Junior Scholarships, tenable at farm institutes or similar institutions, for courses not exceeding a year in duration, in agriculture, horticulture, or dairying.

The scholarships are open to the sons and daughters of agricultural workmen or of working bailiffs, smallholders and other rural workers whose means and method of livelihood are comparable with those of agricultural workmen, and to persons who are themselves bona fide workers in agriculture. The value of the awards is such that neither the recipients nor their parents are normally required to make any contribution towards the cost of training provided. The usual method of selection is by interview, no written examination being held, but candidates must be able to satisfy the Selection Committee that they are in a position to derive educational benefit from the proposed course of instruction and must also intend to follow an agricultural pursuit on completion of their training.

Full information concerning the scheme and forms of application may be obtained from the Secretary of the Ministry, Block 4, Bickenhall Mansions, Baker Street, London, W.1, or from the offices of County Councils.

The latest date for submitting applications is April 30th, 1943.

ABSTRACTS

[A STUDY OF DIAPHRAGMATIC HERNIA IN SMALL ANIMALS. Secord, A. C. (1942.) *N. Amer. Vet.* **23**, (Sept. and Oct.) Pp. 590-599 and pp. 657-661. (10 figs., 9 refs.).]

Rupture of the diaphragm as a result of street accidents is fairly common in the dog and occasionally congenital cases are observed. Animals developing this condition as a result of injury may show obvious symptoms immediately, but when the tear is small distressing symptoms may be delayed for weeks or even months.

The most characteristic feature is pronounced abdominal type of respiration, while the patient tires easily and may be affected with a cough. Auscultation reveals diminution or absence of normal respiratory sounds on the affected side and when intestine is herniated sounds of peristalsis may be detected. Diagnosis should always be confirmed by X-rays, taking lateral and dorso-ventral views after the administration of barium or bismuth.

Operation may be undertaken with confidence, but it is necessary to adopt special anaesthetic technique to maintain respiration. Surgical approach *via* the chest is easier and more satisfactory than the abdominal route previously recorded. Good results have been obtained giving morph. sulph. ½ to ¾ gr. and atrop.-sulph. 1/100 gr. subcutaneously, followed later by half normal doses (*i.e.*, 1/10th gr. per lb.) nembutal intravenously, full anaesthesia being brought about and maintained using ether. A special pump designed by F. L. Robinson, Physiology Department, Toronto University, is used to supply regularly interrupted impulses of compressed air direct into the trachea by means of a catheter. The pressure may be varied to suit individual requirements and the ether flow can also be regulated.

The patient is hobbled in the lateral position with both pairs of legs extended. The skin incision is made over the sixth or seventh intercostal space extending as far as possible in either direction. A small incision is then made in the muscle layer in the centre of the intercostal space. (This technique limits haemorrhage.) The pump pressure is then adjusted, after which the muscle incision is extended. The ribs are retracted and after replacement of the viscera the hernia is repaired with No. 2 chromic catgut sutures of the mattress type, care being taken to avoid punctures of the vena cava. In cases of marginal tears it may be necessary to fix the torn edge to the chest wall at this operation site. Four No. 3 chromic catgut sutures are next applied around the adjacent ribs and all but one of these sutures are tied off, pulling the ribs close together. Air is next expelled from the pleural cavity by altering the pump pressure and at the same time keeping the incision open with forceps. The final rib suture is then tied and muscle and skin suturing is completed. The anaesthesia is stopped, but it may be necessary to continue artificial respiration with the pump for some little time until normal breathing is established. The after care consists of keeping the patient warm and giving 50 per cent. glucose saline intravenously and the animal is kept on a liquid diet for 48 hours. Patients usually make good recoveries, the wound healing in ten days.

It is indicated that a tyre pump or other apparatus may be used satisfactorily if the Robinson pump is not available.

J. W. H. H.

* * * * *

[EPITHELIAL TUMOURS OF HORSES. Runnells, R. A., and Benbrook, E. A. (1942.) *Amer. J. vet. Res.* **3**. 176-179.]

Of 73 epithelial tumours examined between 1920 and 1940, seven were papillomas, two adenomas, ten adenocarcinomas, and 54 squamous-cell carcinomas. In 35 cases, the carcinomas were associated with the eye, usually the third eyelid being involved; the average age of 24 of the horses affected was 8 years. Only one of the 35 cases metastasised. In three cases out of the ten, the adeno-carcinomas occurred in the eyelid and two of these metastasised, suggesting that eyelid adeno-carcinoma of horses is more malignant than the squamous-cell carcinoma of the membrana nictitans. Most of these epithelial tumours appeared when the animals were 7 to 12 years old.

E. C.

Weekly Wisdom

"I say, and say again, 'put your trust in the teachers.' Even an 'agreed syllabus' takes you nowhere, unless you can trust the teacher, who can quietly drive a coach-and-six through such a document, if he desires to do so."—*Nature*, Nov. 14th, 1942, p. 560 (Religious Instruction in Schools), Mr. Brockington, Director of Education for Leicestershire.

REPORT

[NIGERIA: Report of the Veterinary Department for 1941.]

To one who was present at the miniature birth of Veterinary Services in Nigeria some 20 years ago, the reading of this report of great happenings there at present is a most stimulating and gratifying experience. There are few countries that can record a finer accomplishment by their veterinary department, in so short a period, than Nigeria. It is without doubt a striking example of the potentiality of our profession when freedom of action is permitted and when the reins of office are placed in the hands of such a capable man as Capt. Henderson, the Director of the Department in Nigeria.

The record of work for the year under review is divided into the following sections: Disease control, animal husbandry, education of natives in veterinary science, development of the industrial resources of animal origin and laboratory services. Here is a part of the work carried out in the successful campaign against the major diseases: 615,324 head of cattle actively immunised against rinderpest, 293,702 cattle vaccinated against pleuro-pneumonia, 562,348 cattle vaccinated against blackquarter, 48,353 against haemorrhagic septicaemia 34,207 cattle and 741 sheep against anthrax, 92.105 calves, sheep and goats treated for verminous infestation, 12,876 cattle treated for trypanosomiasis together with 100,000 cases of minor ailments treated in 35 animal clinics. All this work was accomplished by 15 veterinary officers helped by stock inspectors and native assistants. Truly this is a wonderful feat by so small a veterinary personnel in a country where climatic conditions and supply problems are difficult.

On the animal husbandry side selective breeding of native cattle and goats has made considerable progress and improvement in the dietary of animals from native grown foods has yielded good results in bacon and beef output. On the industrial side there has been a marked increase in the production of butter, cheese, beef, mutton, pork and bacon and a great improvement in the quality of skins and hides. The goat skin trade of Nigeria has an international reputation. Exports of these skins and hides amounted to £610,792 during the year.

The Secretary of State for the Colonies has given his approval to a scheme of veterinary education for Nigerian natives. The scheme provides for the training of Assistant Veterinary Officers and lower grade Veterinary Assistants. The course for the former extends over 6½ years and for the latter three years. When the services of these natives become available a much more intensive and extensive control can be exerted over the health of animals throughout the country. The training course is being conducted at the Central Laboratory by the Pathologist and his staff.

The report of the Pathologist, Mr. R. W. Mettam, forms an addendum to that of the Director. It is no less striking in the quantity and quality of the work conducted at the laboratory during the year. The output of vaccines and sera to meet the demands of the field staff was on a considerable scale as was the diagnosis of field specimens. This routine work restricted the time available for research, but some important experiments dealing with rinderpest goat virus vaccination, treatment of parasitic gastritis with phenothiazine and tetrachlorethylene, and poultry diseases were carried out.

W. K.

Isle of Man Government information relating to the livestock of the island shows that there has been no outbreak of foot-and-mouth disease on the island for nearly 60 years. The necessary restrictions are applied from time to time whenever there is an outbreak in any other part of the British Isles for preventing affected stock reaching the Isle of Man.

* * * * *

Disease and bad livestock husbandry were the greatest causes of financial drain in Irish agriculture, and no adequate means were provided even to alleviate this unsatisfactory state of affairs, stated Professor W. Kearney, President of the Veterinary Medical Association of Ireland, recently.

* * * * *

In my judgment, our neglect of this industry is a national crime. . . . Agriculture is the only major industry which has ever been conducted on the basis of a gamble.—*Lord Addison.*

* * * * *

Professor J. R. McCall, M.R.C.V.S., has been elected President of the Clydesdale Horse Society, which reports that the number of new members enrolled in 1942 was the highest for 17 years, while the number of life members was the best for 43 years.

QUESTIONS IN PARLIAMENT

Veterinary Colleges in Scotland (Government Grants)

Commander Galbraith asked the Secretary of State for Scotland the number of veterinary students attending the Edinburgh and Glasgow Veterinary Colleges, respectively; and the total Government grants, both capital and annual, made to each of the above colleges since 1925?

Mr. Johnston: The numbers of students attending the Royal (Dick) Veterinary College, Edinburgh, and the Glasgow Veterinary College during the academic year 1942-43 are 235 and 209 respectively. Government grants to the former College for the financial years 1925 to 1942 inclusive for capital and maintenance purposes amounted to £136,702. No grants from State funds were made during these years to the Glasgow Veterinary College.

Commander Galbraith: Is my right hon. Friend aware of the great financial difficulties under which the Glasgow College is carrying on and that it is only able to do so because the professors and assistants are taking lower remuneration than they might expect? Will he consider the question of the Glasgow College in view of the grant given to Edinburgh?

Mr. Johnston: My hon. and gallant Friend is aware that there is a long history behind this going back for 17 years, and that proposals were made to Glasgow Veterinary College that if they would reorganise and co-operate with Glasgow University, grants would be available. They did not see their way to accept the suggestion, and there the matter rests.

Mr. Maxton: Was not the grant withdrawn from Glasgow Veterinary College 17 years ago in the hope that it would put it out of existence and that all the teaching would be conducted in Edinburgh? As the college still survives after 17 years, does not the right hon. Gentleman think it is time the grant was renewed?

Mr. Johnston: I cannot say what purpose was in the minds of those who 17 years ago proposed that there should be only one veterinary college for Scotland. I agree that it involves a hardship to students who have to board in Edinburgh.

Commander Galbraith: Will my right hon. Friend consider the matter again after this period of time and see what can be done?

Mr. Johnston: It is difficult to deal with the matter by way of question and answer, but the Loveday Committee has been given an urgent recommendation to review the possibility again.

. . . . . .

Veterinary Inspection Scheme

Mr. Price asked the Minister of Agriculture whether he can give the figures, to date (March 25th, 1943), of the farmers and livestock owners who have entered the veterinary inspection scheme for the control of the diseases of dairy cattle?

The Minister of Agriculture (Mr. R. S. Hudson): The owners of 5,525 dairy herds comprising 150,000 cows and 80,000 heifers are now participating in the scheme.

Mr. Price: Can the Minister say whether any improvement in the health of dairy herds has been observed?

Mr. Hudson: I do not think there has been time yet.

. . . . . .

Dairy Farms (Sanitary Conditions)

Mr. David Adams asked the Minister of Health whether he is aware of the insanitary conditions of many hundreds of farms in the country devoted to milk production, together with lack of modern cowsheds, apparatus and requisites for this purpose; and what effective steps are being taken to rectify this situation?

Mr. E. Brown: Provisions relating to sanitary and other conditions at dairy farms are contained in the Milk and Dairies Order, 1926 and are enforced by local authorities. Compliance with those provisions is becoming increasingly difficult owing to shortage of labour and materials and other factors directly associated with the war. The attention of local authorities has recently been drawn to the position and they have been asked to concentrate attention upon cleanliness and methods of production.

. . . . . .

Milk (Pasteurisation)

Mr. Salt asked the Minister of Health whether, in view of the conflicting policies which still obtain in regard to the pasteurisation of milk supplies in Great Britain, he will institute a comprehensive enquiry to establish a final settlement of the issues at stake in the light of all available scientific and economic evidence?

Mr. E. Brown: No, Sir. I am advised that the facts are well known, and I do not think that any useful purpose would be served by the course suggested.

Mr. Purbrick: Will the right hon. Gentleman give an undertaking that pasteurisation will not be made compulsory?

Mr. Brown: I can give no undertaking of that kind.

Mr. Douglas asked the Minister of Health whether a report by Professor G. S. Wilson on pasteurisation of milk was commissioned by the Minister directly or through the Medical Research Council; and what fee was paid for the preparation of the report?

Mr. E. Brown: Professor Wilson was asked in 1939 by my predecessor to undertake the collation and review of the existing evidence on the whole subject of pasteurisation and the safety of milk supplies. He was paid a small grant for expenses. Owing to the outbreak of war, publication of the report by the Department was deferred, and in 1942 Professor Wilson was given permission to bring the report up to date and to arrange for its publication privately.

Mr. David Adams asked the Parliamentary Secretary to the Ministry of Food whether, in view of overwhelming scientific opinion in favour of pasteurisation as a means of destroying pathogenic micro-organisms productive of many diseases in consumers, it is now intended that all milk for human consumption shall be pasteurised and by effective handling thereafter rendered safe for the nation?

Mr. Mabane: I would refer my hon. Friend to my reply on March 3rd to the hon. Member for Southampton (Dr. Russell Thomas). (Reproduced *Vet. Rec.* **55**. 132.—*Editor.*)

. . . . . .

Tuberculosis (Statistics)

Mr. Douglas asked the Minister of Health to state, for the year 1938, the number of deaths from pulmonary and non-pulmonary tuberculosis, respectively, which occurred in the following areas of England and Wales, respectively: the administrative county of London, the rest of Greater London, excluding the county boroughs of Croydon and East and West Ham, the county boroughs, the non-county boroughs and urban districts and the rural districts?

Mr. E. Brown: The figures for which my hon. Friend asks are as follows:—

	Respiratory Tuberculosis	*Other Tuberculosis*
London Administrative County ...	2,590	347
Croydon County Borough	117	20
East Ham County Borough	81	8
West Ham County Borough	172	19
The rest of Greater London	1,777	318
Outside Greater London /		
County Boroughs	8,474	1,492
Other Urban Areas	5,968	1,375
Rural Districts	2,751	667

My hon. Friend might like to refer to Table 24 of the Registrar General's Statistical Review of England and Wales for 1938, in which the numbers of deaths from respiratory and other tuberculosis are analysed in considerable detail of area, sex and age.

SOCIETY OF DAIRY TECHNOLOGY

A Society of Dairy Technology has been formed. Professor H. D. Kay, Director of the National Institute for Research in Dairying, presided over a gathering in London on March 2nd which was representative of all aspects of the dairy industry in Great Britain.

The objects of the Society are to improve and co-ordinate practice in all branches of the dairy industry by the application of knowledge gained from experience and experiment; to provide opportunities for discussion and collaboration between persons interested in improving the technical practices of the dairy industry; to encourage technical education for persons working with milk and its products; to encourage scientific enquiry into problems arising in the dairy industry; and to encourage the distribution and use of technical information among persons working in the dairy industry. The Society will not engage in political activities nor will it infringe on the duties or responsibilities of existing organisations.

Membership in the Society is open to all who are interested in the scientific and technical aspects of the dairy industry, including production, processing, manufacture, equipment, distribution, education, research, public health and consumption. Further particulars can be obtained from the Hon. Secretaries at Express Dairy Co., Ltd., Claremont Road, Cricklewood, London, N.W.2, or at the Imperial Bureau of Dairy Science, Shinfield, near Reading.

NOTES AND NEWS

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events

April 7th.—Special Meeting Editorial Committee, N.V.M.A., 10.30 a.m.; Ordinary Meeting 2.30 p.m., at 36, Gordon Square, W.C.1.

April 7th.—Annual General Meeting of the National Veterinary Benevolent and Mutual Defence Society, at Manchester, 3.30 p.m.

April 8th.—Annual General Meeting of the South-Eastern Division, N.V.M.A., at Maidstone, 2.30 p.m.

April 9th.—Meeting of the Lancashire Division, N.V.M.A., at Manchester, 2.30 p.m.

April 9th.—Meeting of the Sussex Division, N.V.M.A., at Brighton, 2.15 p.m.

April 12th.—N.V.M.A. Drafting Committee on Sheep Diseases, Royal Station Hotel, York, 3.30 p.m.

April 13th.—N.V.M.A. Survey Committee, Royal Station Hotel, York, 2.30 p.m.

April 14th—15th.—**R.C.V.S. Committee and Council Meetings**, Royal Station Hotel, York.

April 16th.—Special "Open" Meeting of the Southern Counties Division, N.V.M.A., at the Guildhall, Winchester, to consider increased, cleaner and safer milk production, 2.30 p.m. Short business meeting at the Southgate Hotel, Winchester, 12 noon.

April 17th.—Meeting of the Association of Veterinary Inspectors, B.M.A. House, Tavistock Square, London, W.C.1, 2 p.m.

April 21st.—Special Meeting of the Scottish Branch, N.V.M.A., at Glasgow, to discuss the Draft Bill, R.C.V.S., 2.30 p.m.

April 29th.—N.V.M.A. Joint Veterinary Officers and Public Health and Parliamentary Committee, 36, Gordon Square, W.C.1, 11.30 a.m.

April 30th.—**N.V.M.A. Council Meeting**, Connaught Rooms, Great Queen Street, W.C.2, 11.30 a.m.

* * * * *

Ammunition for Humane Killers

Members experiencing difficulty in obtaining supplies of cartridges for use in humane killers are requested to notify the General Secretary, N.V.M.A., 36, Gordon Square, W.C.1. It would help in taking the matter up with the Ministry of Supply if those responding to this request would state the exact type of ammunition they use and the name and address of the firm from whom they usually get their supplies.

Bull Rings

The opportunity also is taken to request members who find difficulty in obtaining bull rings, to communicate with the General Secretary, giving the name and address of their customary supplier.

* * * * *

The Veterinary Educational Trust

In the issue of the *Court Circular* of Saturday last, the following announcement was made:—

The Duke of Norfolk, President of the Veterinary Educational Trust, gave a Luncheon at Claridge's on Thursday to further the interests of the Trust. Among those present were: The Earl of Iveagh, Viscount Leverhulme, Viscount Nuffield, Lord Horder, Lord Iliffe, Lord Perry, Sir Joseph Barcroft, Sir Thomas Baxter Sir George Beharrell, Sir Weldon Dalrymple-Champneys, Sir Richard Cooper, Sir William Gavin, Lt.-Col. Sir Francis Humphrys, Sir John Jarvis, Sir Norman Vernon, Mr. T. R. G. Bennett, Captain J. P. Black, Mr. Stanley Chivers, Mr. Edward Hulton, Mr. G. H. Livesey, Mr. J. H. Maggs, Mr. J. V. Rank, Mr. J. Arthur Rank, Lt.-Col. G. Rees-Mogg, Mr. G. E Shrimpton, Mr. W. L. Stevenson, Mr. J. Smith, Dr. W. R. Wooldridge.

* * * * *

PERSONAL

Mr. Norman Dobson, B.Sc., M.R.C.V.S., York Cottage, Pirbright, Surrey, Senior Research Officer, Veterinary Laboratory, Ministry of Agriculture and Fisheries, Weybridge, has been elected a Fellow of the Royal Society of Edinburgh.

Marriages.—Etoe—Eyre-Walker.—On March 20th, at Kenwyn Parish Church, Truro, D. Russell Etoe, M.R.C.V.S., son of Mr. and Mrs. F. C. Etoe, The Brae, Craigellachie, Banffshire, to Margery Winifred Eyre-Walker, second daughter of Mr. and Mrs. B. Eyre-Walker, Woodside, Barnbarroch, Dalbeattie, Kirkcudbrightshire.

Joss—Barker.—On January 23rd, 1943, at Christchurch, Wanstead, Graham Eric Joss, M.R.C.V.S., to Joan Fawcus Barker, B.PHARM., PH.C.

. . . . . .

Forthcoming Marriage.—Col. C. I. E. Rabagliati—Miss J. Pringle.—The engagement is announced between Colonel C. I. E. Rabagliati, R.E.M.E., elder son of Major and Mrs. D. S. Rabagliati, St. Margaret's Road, Edinburgh, and Joan, only daughter of Mrs. Pringle, of St. Lambert, Montreal, and the late Mr. C. Pringle.

* * * * *

R.C.V.S. OBITUARY

Cranston, William Thomas, 244, Iffley Road, Oxford. Graduated London, December 12th, 1898. Died March 22nd, 1943; aged 71 years.

Kay, Alexander Thain, Greenburn, Alyth, Perthshire. Graduated N. Edinburgh, April 22nd, 1885. Died March 21st, 1943.

Yeomans, Herbert, 141, Church Lane, Handsworth Wood, Birmingham, 20. Graduated Edinburgh, May 21st, 1903. Died suddenly, March 28th, 1943; aged 65 years.

* * * * *

MANTON TRAINER'S FORTUNE

We await confirmation by the institution concerned of the published intimation, which many of our readers will have seen, that a veterinary college is among the largest beneficiaries under the will of Alec Taylor, whose fame as a trainer of racehorses earned him the title "Wizard of Manton." Mr. Taylor, who died in January at the age of 80 years, left £595,790. He inherited the great Manton stable in Wiltshire, with a fortune, from his father, and from 1900 to 1927, when he retired, he trained over 900 winners. His horses gained over £800,000 in stake money. He won all the classic races, including three Derbies.

* * * * *

NATURE PRESERVATION IN POST-WAR RECONSTRUCTION

The Nature Reserves Investigation Committee of the Conference on Nature Preservation in Post-war Reconstruction has issued a report (representing the third memorandum published by the Conference) dealing with the general principles which should govern the selection of nature reserves in Great Britain. Proposals concerning particular areas are to be made in a subsequent report.

The purposes of nature conservation, the committee states, come under three heads: scientific and economic study, the enjoyment of nature by the public, and education in natural history. Under the first head, the survival of natural or semi-natural communities of plants and animals to provide material for serious study can be met only by means of reserves in districts suitable to the particular forms of wild life to be preserved, and such reserves must be managed with this object alone. They should be subjected to a unified central management, and regarded as matters of national concern.

Areas set aside under the second and third heads—public enjoyment and education—are very different in aim, and must be accessible to centres of population and schools. For them local interest and enthusiasm are essential, and they may well be locally managed.

Nature reserves are areas in which the primary object is the perpetuation of the wild animal and plant life they contain. Some are habitat reserves, aimed at preserving a particular type of natural country, moor, or sand dune, for example. Others are intended to safeguard individual species; but obviously, since a species of animal or plant can only exist in certain conditions, these species reserves must also be, to some extent, habitat reserves also.

The report deals also with such topics as the relation of nature reserves to national parks; management, whether central or local; methods of acquisition; and public access. The committee ends by suggesting that the Government should take formal responsibility for the conservation of wild life, both plant and animal, and that this responsibility might be laid upon a special department of the Ministry of Town and Country Planning.

Copies of the report (price 6d.) may be had from the Honorary Secretary, Dr. G. F. Herbert Smith, care of British Museum (Natural History), S.W.7.

H.M. STATIONERY OFFICE PUBLICATIONS

The undermentioned have been published recently. Copies can be purchased through any bookseller, or directly from H.M. Stationery Office.

	Price net s. d.	*Post free* s. d.
COMMAND PAPERS (Session 1942-43):		
(6434). Agricultural Research Council. Accounts showing the Receipts and Payments for 1941-42; together with the Report of the Comptroller and Auditor General thereon ...	0 1	0 2
SCOTTISH EDUCATION DEPARTMENT:		
Agricultural Colleges (Scotland), Additional Grants to, 1943. March 4th, 1943	0 1	0 2

CORRESPONDENCE

Letters to the Editor should reach the Office not later than by the first post on Monday morning for insertion in following Saturday's issue.

The views expressed in letters addressed to the Editor represent the personal views of the writer only and must not be taken as expressing the opinion or having received the approval of the N.V.M.A.

* * * * *

THE VETERINARY SURGEONS ACTS (AMENDMENT) BILL

Sir,—As one who has been out of touch with veterinary affairs in this country for many years, perhaps it is only natural that great surprise should be felt when reading the Memorandum and Draft Bill for the first time the other day.

I was under the misapprehension that we were still prohibited from having any alliance with quacks. Now I understand that after half a century of vigilance and threats on the part of the R.C.V.S. we are well on the way towards giving non-qualified persons a respectable title, also to having their names inserted in the register under certain conditions, one of which is to pay the R.C.V.S. an annual subscription.

We hear so much about democracy, socialism, etc., that people are often apt to be carried away with the idea that qualified persons should not monopolise the right to exercise their respective professions, but, on the contrary, should share this right with the non-qualified. They are blind to the fact that something quite distinct is essential in order to be skilled in the art of modern science. Veterinary science is not alone in this respect, because there are quacks anxious to disguise themselves as skilled in the arts of almost every profession. We have only to glance through our periodicals to see their flourishing propaganda, claiming to cure all ailments of human beings. They even draw public attention on platforms in most conspicuous places in different markets, and it is amazing how they influence a certain class of people. Does the Medical Board offer these mountebanks a flourishing title of "human practitioner" on their register in order to pacify them? Are they allowed to perform internal operations on human beings without infringing the law?

Why should we suddenly propose to associate with these persons and bestow on them titles which may misguide the public into thinking that they are qualified veterinary surgeons. Do many of our leaders delude themselves that this procedure will do away with quackery? In my opinion it is a means of encouraging it, is likely to discourage any prospective students, and is only the thin edge of the wedge which in time will widen the narrow path into an open highway. If anxious to associate with them, why not offer them certain facilities such as exemption from the entrance examination in order to encourage them to enter the profession in a legal and proper manner? Of the two evils this would be the lesser.

A Bill of this kind seems particularly ill-timed when such elaborate plans for post-war higher education in all spheres are being made.

As this Bill with the strange device is of vital importance to the veterinary profession, would it not be as well to give an opportunity to all members to vote on the question before carrying it a step further?

Yours faithfully,
EDWARD MORGAN.

"De Lejos,"
23, Crest Road,
Hayes,
Bromley,
Kent.
March 20th, 1943.

Sir,—Allow me to express my agreement with the views put forward by Mr. J. Deans Rankin in your current issue.

Further—is it in accordance with the principles of professional ethics or social justice to admit to the register any unqualified persons whilst any of our Members are unable to obtain employment in the profession in which they have been trained, and may, perhaps, have many years' experience?

Yours faithfully,
E. KEMPTON GATFIELD.

8, Balston Road,
Poole.
March 22nd, 1943.

* * * * *

VETERINARY EDUCATION

Sir,—The subject of veterinary education is obviously one of such paramount importance that Council, N.V.M.A., have been well advised to devote much time to a general discussion on the problem.

At the first part of the special Council meeting on this subject many eminent personages gave us the benefit of their views on this subject, but the debate was extremely vague and few concrete suggestions for a future policy were offered.

I stated in effect at that meeting that the greatest difficulty was the fact that our work was now so diversified that it was not reasonable to expect one basic and common course to fit graduates for the varied lines of veterinary work which they might take up.

I now venture to suggest a possible remedy without attempting to offer any details, but as a possible basis of discussion. In brief, that much of the more detailed work of our present course be omitted and the course be reduced to four or even three years (if pre-veterinary subjects have been taken at school).

That three post-graduate courses (of one or two years) be instituted, these courses to be:—

1. Preventive medicine and food inspection.
2. Physiology, biochemistry and pathology.
3. Clinical medicine and surgery.

There may be certain disadvantages in such a scheme, but at least our graduates would be turned out well qualified to undertake any one of the main different branches of veterinary endeavour.

Yours faithfully,
L. GUY ANDERSON.

49, Cambridge Street,
Aylesbury,
Bucks.
March 22nd, 1943.

* * * * *

Sir,—Many years ago, in a paper given before the Eastern Counties Veterinary Association, I stated that "the observant man knows most about what he meets with oftenest, the country practitioner can give the town man a wrinkle or two and the town practitioner is apt to be a little arrogant and cocksure about certain diseases, especially appertaining to the horse."

It appears then that one of the first things that the graduate should secure is the *opportunity* of seeing and assimilating all he can in connection with his profession, both on the practical and theoretical side. How is he to do this? Two or three ways are open to him. One of the greatest advances in connection with squashing the cry about "the incompetence of the newly qualified" has been taken by the annexation of a field station and the use of a farm by one of the universities. It will perhaps not produce finality but it is a good step in the right direction and shows vision. Another way is to act as assistant and locum, not only to one man but several, and observe what is good and discard what is bad. In addition to these, and to keep abreast of the times, a good private library is an advancing asset.

As regards preliminary education, I will refrain from stating which, in my opinion, has the greater amount of "leavened bread," the public school or the university. I am not alluding to the mere acquisition of educational certificates, but to the formation of character, manliness and grit. Where monitors and prefects exist there is always a chance that great good may be done by them to the rank and file, and many examples of noted work and progress will arise in after life for that school or university, and with a modicum of sport such as cricket, football, tennis, rowing, swimming, dancing, etc., and some acquisition of the Arts, men will learn to "play the game" in after life so that

> "When the last Great Scorer comes
> To write against his name,
> He'll ask, not did he win or lose,
> But how he played the game."

This verse is a pointer to good ethics which are perhaps slightly loose in our profession.

I am all for the man who is a good "mixer"; he learns to the end of his days, and so it is a benefit to mingle with men and women too of the same and other vocations.

Finally, I think true education is really largely a personal matter and comprises good home influences and surroundings, frequent conscience calling, the reading of good literature in days or moments of leisure, the meeting with broad-minded and well educated school masters, a wise father or mother and perhaps both, and a happy family atmosphere.

In our case something might be written about "a sound mind in a healthy body" and a good and fairly tall and strong physique to carry us home in our vocation, but if I enlarged on the subject I might tread on a few corns, so I will refrain and I will reiterate the good old formula of "*Vis Unita Fortior*" and hope all our members and fellows will often cogitate on it and not relegate it to the limbo of forgotten precepts.

Yours faithfully,

Bolton. G. Mayall.

* * * * *

DISADVANTAGE OF DISEASE PRODUCTION TO PARASITISM

Sir,—Mr. Foggie's disagreement with the broad generalisation that disease production is disadvantageous to successful parasitism is based on the mistaken idea that it concerns the responses of individual parasites and their individual hosts, whereas my generalisation is based on theories concerning the interaction of species. It is to avoid the possible annihilation of the host species by the parasite species that the wonderful host-parasite adaptations have been elaborated during the course of their evolution together. Mr. Foggie's citation of *Coenurus cerebralis* as an apparent exception is agreed to; reference has, in fact, been made to it by myself on more than one occasion, as the only obvious exception among the helminth parasites of domestic stock to the general rule that successful parasitism avoids pathogenicity. The other cystic cestodes to which Mr. Foggie refers, however, fall admirably into line with my generalisation. Clinical cysticerosis and hydatid disease are of extremely rare occurrence amongst domestic animals and in spite of the high incidence of some of the parasites (3·36 per cent. of 23,000 Welsh sheep infested with *Echinococcus*) I have yet to meet the veterinary practitioner who has seen the clinical condition.

Nor does Mr. Foggie's nematode example differ from the rest. Clinical trichinosis, if it occurs at all among farm pigs, is extremely rare; of still greater significance, however, is the very high incidence of *Trichinella* infestation among human beings, as compared with the low incidence of trichinosis. Recent studies in the United States have revealed that the incidence of infestation among the general population varies, in different localities, between 3 per cent. and 20 per cent., with an average for the country of 12 per cent. Observations show it to be no less prevalent among our own people in Great Britain. I may be infected myself and I see no reason why Mr. Foggie should have been more fortunate nor serve as a less fitting example of the harmless nature of normal parasitism.

Yours faithfully,

Veterinary Laboratory, E. L. Taylor.
Ministry of Agriculture,
Weybridge.

* * * * *

CONTROL OF SHEEP SCAB

Sir,—Sheep scab infection in Britain shows no decrease. Over the last six years there have been 250 confirmed outbreaks annually. It may be that the persistence of this disease is due to too long an interval between dippings.

Mr. W. Downing states (*J. comp. Path.*, 1936, pp. 163-209) that the eggs of *Psoroptes communis* var. *ovis* hatch usually in three days (two is the shortest time). The whole life cycle usually lasts eleven days.

Of five completely traced life histories four took eight days from hatching to develop and lay more eggs. However, assuming that all males were killed at the first dipping, eggs would not appear until 10½ days.

If, as must commonly occur, most of the dip is lost from fleeces owing to heavy showers subsequently, it is feasible that a batch of eggs will be present from the eleventh day after the first dipping.

Mr. Dunn, of the Ministry, reports (*Vet. Rec.*, Sept. 16th, 1939) an outbreak in which 20 sheep were affected in a flock of 100. They were double dipped; dipped once after a few weeks and then double dipped again. They were then hand dressed for maggots and still *Psoroptes* were demonstrated. Time intervals are not stated. Assuming no reinfection from other sheep, etc., it is probable that these sheep had eggs on them at the second dippings.

Mr. Downing has shown the symptomless latent period to extend approximately from March to September. At this time mites are found in the inguinal folds, tails, scrotums, and infraorbital fossae of sheep, and require hand dressing to eradicate them.

About August and September, however, they leave these sites and set up small lesions on the sides, shoulders, etc., and are killed by ordinary one-minute immersion.

It seems advisable, therefore, that the interval should be five to ten days and not eight to 14 as now stipulated in the Order. Also that all sheep in any confirmed area should be for a second time double dipped in the following August or September, also all sheep which have been sold out of such a confirmed area. (They would, of course, be double dipped immediately after confirmation.)

The importance of one-minute immersion should be impressed on farmers and police and Dr. J. N. Oldham states (*Vet. Rec.*, **49**, No. 40) that after 200 sheep have been put through a dipper there is such an emulsion of dung and urine as to be a main cause of strike to further sheep immersed.

Most outbreaks are confirmed in November, December and January and latent cases have probably been spreading infection since the onset of cold weather (late September). Double dipping just prior to this (August or September) would reduce such outbreaks, and would fit in with ordinary autumn dipping against maggots.

Yours faithfully,

Royal Veterinary College, I. Macadam.
Streatley House,
Streatley, Berks.
March 19th, 1943.

* * * * *

POULTRY AND RABBITS

Sir,—I was interested in the papers on these subjects, but rather surprised that the question of soiled greenstuff was not referred to as a cause of death, especially in weaners and young rabbits. For several years I have advised rabbit keepers to wash all greenstuff in salt and water and leave it to wilt before putting down as food. Rabbit owners commonly feed green weeds in much variety to rabbits, and yet a great percentage of these foods is soiled by birds, dogs, cats, vermin and even by human beings. *Post-mortem* findings are generally inflammation of the stomach at the pyloric end and surfeit or fermentation of food in the intestines. The simple precaution of salt and water washing and drying will reduce mortality almost immediately.

Three affections of the liver can in my opinion be diagnosed by the clinician: (1) coccidiosis, in which there may be (but by no means always) pin-point or larger spots on the liver and gland enlargement of the bile ducts; (2) *Cysticercus pisiformis*, diagnosed by the presence of the typical lesions on the surface of the liver, accompanied often by a "mosaic appearance of liver streaks," and (3) Pseudo-tuberculosis—rather rare—by slightly raised, fairly large spots.

Supporting the liver findings there may be coccidia in the intestines, tape-worm cysts in the mesentery, and nodules in the bowels (indicative of pseudo-tuberculosis).

Very common causes of death in fowls, in my experience, under present circumstances, are fatty degeneration of the liver and fatty degeneration of the heart, with an undue amount of abdominal fat, and in this connection the supply of potatoes, which are fattening, should be limited. For coccidiosis in poultry I recommend flowers of sulphur and beta-napthol, and the birds should be bedded on sawdust frequently renewed and burnt. Balancer meal is another source of trouble, being frequently too coarse and fibrous.

I want to ask the experts whether there is such a complaint as "layers' cramp" in fowls. I opine that, whilst this does occur in pullets, it is often a misnomer for fowl paralysis or many different internal digestive or reproductive diseases.

Are limestone grit or oyster shell ever absorbed? I am constantly finding them unchanged in the system.

Yours faithfully,

Bolton. G. Mayall.

* * * * *

CEREBRO-SPINAL EUTHANASIA IN THE DOG

Sir,—Referring to the letter from Messrs. Hardy and Storey appearing in to-day's issue of *The Veterinary Record*, do these gentlemen mean the obturator foramen, as published, or do they mean the foramen magnum as mentioned in the extract published on February 6th?

Yours faithfully,

5, Bank Parade. L. R. Geffen.
West Kensington, W.14.
March 27th, 1943.